First Grade Lesson

Describing accurately

Objective: Describe things as accurately as possible and compare observations with those of others.

Activities need to be set up before you begin these lessons.

Use the PowerPoint presentation to guide you

1. Begin by telling the students about the team.
2. Discuss with the students that they are going to be scientists today and to be a scientist, you must describe things accurately. Using the Poly Density Bottle – have the students as a class describe the bottle
3. Do the whole group density demonstration – **Where Will it Land** (see below). Direct students to the first sheet of their journal to record information for this demonstration.
4. Divide the class into 4 groups and direct them to their beginning station
5. Groups rotate through the activities
6. Regroup and clean up

Engagement - Group Density Demonstration - Where Will it Land

Leading question – Why do objects that look the same size sometimes have different weights?

Materials: (small cups of these will be provided)
Clear Bottle
Water
Honey
Oil
Penny
Cork
Rock
Paperclip

1. Direct students to open their recording journals and find the page titled "Where Will It Land". Each group of students should have a sample of water, honey, and oil to record their observations. Students will describe the 3 liquids by feel and smell. Have them to record this in their journal.
2. Next, students will draw in their journal which order they think the liquids are going to settle.
3. Taking a poll of the class decide which liquid to pour on the bottle, middle, and top. You can get volunteer students to come and do this task. Students will need to draw the way the liquids actually settle (honey, oil, water).

4. Predict where the objects will settle, drop the objects into the bottle, and draw the actual settlement.

Explain that objects that liquids also have weight. Objects that look the same size can sometimes have different weights and this has to do with their density. The rock and the cork are almost the same size but the rock is denser than the cork; the rock weighs more.

The densest liquid should be on the bottom. The denser a liquid is, the easier it is for an object to float on it.

Now have groups rotate to small group experiments.

Directions for each experiment

Making Worms (Worm Goo)

Materials
Cups
Worm Goo Activator
Worm Goo
Tweezers
Petri Dish
Lab Trays

1. Place worm goo in a petri dish and ask students to pass it around and to draw what they see. Students should then describe how it feels and smells. Allow students to discuss their observations.
2. Have students choose a color of worm goo then squirt the worm goo into the cup of activator solution.
3. Using tweezers remove the worm from the solution and putting it onto a Ziploc bag and then drawing and describing their worm.
4. Answer the drawing conclusion question and compare observations with classmates
5. Make sure they put their name on their Ziploc bag.

Color Mixing

Materials:
Lab well trays
Pipettes
Color tablets – blue, yellow, and red
Water
Paper towels

1. Have the students list all the colors they can think of in their journal. Explain they are going to mix colors together to create other colors. Students will make a prediction as to which colors to mix together to make orange and green. Have students to practice using the pipette by mixing 6 drops blue and 6 drops of red together to make purple.
2. Hypothesize what colors mixed together will give you green, purple, pink, black, brown and orange.
3. What happens when you change one variable? Add 10 drops of yellow to an empty well and 10 drops of red and record data. Add 10 drops of blue to an empty well and 10 drops of yellow and record data.
4. Explore with the colors – mix as many solutions as possible.
5. While you are mixing, record how many drops of each color makes a different solution on the data sheet.
6. Share your results with one another. Who might do these tasks for a living and why?

Magic Finger Science Experiment

Materials:
Bowls
Water
Black pepper
Bars of soap

1. Fill a bowl with water
2. Sprinkle pepper into the bowl. Have the students touch the water with their finger in the center of the bowl. Draw what happened.
3. Have the students rub their finger over the bar of soap and then touch the water again. Draw what happened this time and write an explanation in your journal.

Leprechaun Pudding

Materials:
Pistachio Pudding Mix (one box per 7 children)
Milk (1/4 cup per student)
Dixie cups
Ziploc Bags

*Remind students they are not to eat any of this activity

1. Give each student a Ziploc bag with 1 tablespoon of pudding mix in the bag. Have students discuss the color, texture, smell.

2. Have students to help each other to pour a small Dixie cup of milk in each bag.
3. Seal the bag and squeeze. The warmth of their hands helps to cook the pudding.
4. Say the magic words...Leprechaun Magic! Their sample will not be green with gold nuggets! (The white powder hid the pistachios that had been there all along)

FIRST GRADE
ELEMENTARY OUTREACH PROGRAM
(EOP)

Describing
Accurately

NATIONAL CANCER INSTITUTE

What Does it Mean to Describe Something

Describe what you see in the bottle

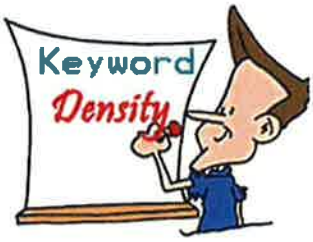
Where Will It Land?

1. Describe each liquid in your journal (how does it feel/smell)
2. If we pour the liquids in the glass which one will be on the bottom? In the middle? On top? Draw the order you think they will settle in your journal

Predict where each object will land

How were your predictions?

The same amount of two different liquids will have different weights because they have different masses. The liquids that weigh more (have a higher density) will sink below the liquids that weigh less (have a lower density).



Density says how heavy something is

Experiments Today

- ❑ Making Worms
- ❑ Color Mixing
- ❑ Magic Fingers
- ❑ Leprechaun Pudding

FIRST GRADE ELEMENTARY OUTREACH PROGRAM (EOP)

Describing Accurately

STUDENT JOURNAL

NAME: _____

National Cancer Institute at Frederick
eop@mail.nih.gov

NATIONAL CANCER INSTITUTE

Where will it land?

You will be creating a bottle with a mixture of honey, cooking oil and water.
Which layer will be on bottom? You will then drop a penny, cork, rock, and paperclip into the bottle. Will they sink or float?

Draw and describe your 3 liquids (what do they feel like, smell like)

Water	Honey	Oil

Liquid Layers – draw a prediction of which layer will be on bottom, middle and top out of honey, cooking oil and water then draw what actually happens

Guess	Actual

Draw where you think the cork, penny, rock, and paperclip will land and then draw what actually happened

Guess	Actual

Density is how much something weighs; it's mass.

Which liquid is the densest?

Which liquid is the lightest?

Which object is the densest?

Which object is the lightest?

Mixing Colors

List all the colors that you can think of:

_____

_____

_____

_____

Predict which of the colors will mix together to make orange and green
(red, yellow, blue)

_____ + _____ = ____orange_____

_____ + _____ = ____green_____

Practice mixing colors.

	+		=	
blue		red		

Test your predictions below. Color in your results.

	+		=	
				orange

	+		=	
				green

Using your colors try to make all the colors that you can. You may mix 2 or 3 colors to make your new colors. Don't forget to record the number of drops you used.

Solutions (Colors Created)	Red (# of drops)	Blue (# of drops)	Yellow (# of drops)
	10		10
		10	10

Making Worms

What can you notice about "worm goo" using your senses? Draw a picture of what you notice. Use color and details. Also use words to describe the worm goo. How does it feel? Look? Sound? Smell?

My Observations:

Worm Goo Before | Worm Goo After

Drawing conclusions: I think worm goo reminds me of

Magic Finger Science Experiment

Supplies:
A bowl
Water
Black pepper
Bar of soap

Directions:
1. Fill the bowl with water.
2. Sprinkle pepper into the bowl. Touch your finger to the center of the water. Draw what happened.
3. Next, rub your finger on the bar of soap and then touch your finger to the water. What happened this time?

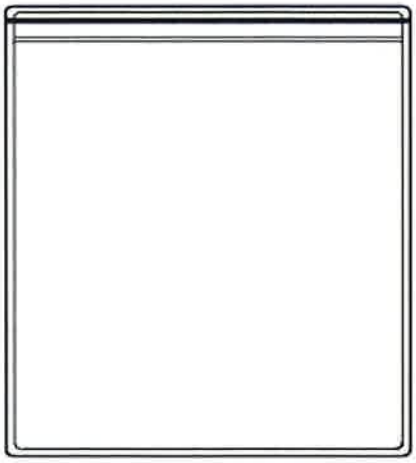
No soap	Soap

Explain what happened.

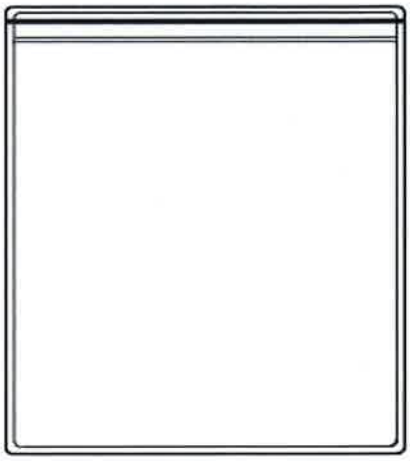
Leprechaun Pudding

Draw a picture of your Leprechaun Pudding before the milk. Then draw a picture of how it looks after you added the milk. Finally write about what you discovered!

Before



After



Explain what happened.

Reflections Page

What did you learn today?

Which activity did you like the best?

Vocabulary

DESCRIBING	DENSITY
OBSERVATIONS	SENSES